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STATE OF MONTANA

BULLETIN

OF THE

Department of Public Health

Vol. 5 February 15, 1913 No. 11

MONTANA STATE BOARD OF HEALTH

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State Bacteriologist,
EMIL STARZ, Ph. D.

HELENA, MONTANA.

Published Monthly at Helena, by the State Board of Health.

"The science of disease prevention, if properly applied, can add fifteen years to the present average length of human life."—Prof. Irving Fisher, Yale.

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This Bulletin will be mailed monthly to any person in Montana upon request mailed to the Secretary of the State Board of Health at Helena.

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WHY SMALLPOX IS NOT QUARANTINED.

(New Bern, N. C., Journal.)

Editor Journal: There appeared in the columns of the Journel yesterday morning a query in regard to the abolition of quarantine against smallpox. As the writer of this query evidently does not understand the situation, and as I have found there are many others who do not understand it, I take the liberty, as a member of the Craven County Board of Health, to herewith furnish the explanation.

The state has been for many years expending $50,000 annually enforcing quarantine against smallpox. Whom did this quarantine protect? Not you, who have been vaccinated, but the unvaccinated class, those who, from ignorance or other less pardonable reasons, refuse to be vaccinated. From whom did the State derive the money to pay for this quarantine? From you who have been vaccinated, and, therefore, need no protection. The unvaccinated class in practically all instances is made up of those who do not pay taxes. You see, then, the answer to the query is simple.

Vaccination is an absolute protection against smallpox. If you have been vaccinated you need fear smallpox no more than chickenpox. If everyone were vaccinated smallpox would be wiped off the face of the earth. It is perfectly possible for everyone to be vaccinated. This county, through its County Superintendent of Health, will vaccinate any one free of charge. Vaccination is practically devoid of danger; a suckling infant may be vaccinated with impunity, and as a matter of fact this is really the best time to vaccinate, as the reaction at this age is comparatively slight.

Taking all these things into consideration, why then should you, who pay the taxes and have been vaccinated, be taxed to protect those from smallpox who pay practically no tax, and who foolishly refuse to be vaccinated? The State has decided that it has no right to thus burden you unnecessarily, and it has, therefore, abolished quarantine against smallpox. It is anticipated that by doing this, not only will the taxpayer of the State be relieved of the cost of the quarantine, but also more individuals will now be vaccinated than formerly to protect themselves against the disease and that, therefore, the incidence of smallpox will be considerably decreased.

When a case of smallpox occurs now in any community in this State, it is the duty of the County Superintendent of Health to put a placard on the house in which the case is confined, and to notify the public of the existence of the case and its location. It is then "up to" the unvaccinated individuals in the community to take their choice between vaccination and protection from the disease, or remaining unvaccinated and rendering themselves liable to infection.

RICHARD N. DUFFY, M. D.,
Member Craven County Board of Health.

DR. OSLER'S CHALLENGE TO THE ANTI-VACCINATIONISTS.

"A great deal of litreature has been distributed casting discredit upon the value of vaccination in the prevention of smallpox. I do not see how any one who has gone through epidemics as I have, or who is familiar with the history of the subject, and who has any capacity left for clear judgment, can doubt its value. Some months ago I was twitted by the editor of the Journal of the Anti-Vaccination League for 'a curious silence' on this subject. I would like to issue a Mount Carmel-like challenge to any ten unvaccinated priests of Baal. I will go into the next sever epidemic with ten selected vaccinated persons and ten selected unvaccinated persons—I should prefer to choose the latter—three members of parliament, three anti-vaccination doctors, if they could be found, and four anti-vaccination propagandists. And I will make this promise—neither to jeer nor jibe when they catch the disease, but to look after them as brothers, and for the four or five who are certain to die I will try to arrange the funerals with all the pomp and ceremony of an anti-vaccination demonstration."—American Magazine.

COMMUNICABLE DISEASES FOR THE MONTH OF JANUARY, 1913.

Smallpox—Cases of Smallpox were reported as follows: Blaine, 4; Great Falls, 7: Custer. 23; Dawson, 1; Fergus, 2; Kalispell, 3; Granite, 5; Hill, 1; Meagher, 4; Missoula City, 4; Sanders, 4; Silver Bow (exclusive of Butte), 10; Butte, 3; Teton, 1; Valley, 1. Total, 73. Total last month, 33. Total January, 1912, 44.

Diphtheria—Cases of Diphtheria were reported as follows: Great Falls, 1; Dawson, 1; Fergus, 1; Helena, 1; Ravalli, 2; Butte, 4; Teton, 1; Billings, 3. Total, 14. Total last month, 10. Total January, 1912, 15.

Scarlet Fever—Cases of Scarlet Fever were reported as follows: Broadwater, 6; Great Falls, 2; Carbon, 2; Dawson, 1; Anaconda, 1; Fergus, 4; Gallatin, 1; Hill, 1; Helena, 2; Madison, 6; Missoula (exclusive of Missoula City), 1; Missoula City, 4; Park (exclusive of Livingston), 1; Livingston, 1; Powell, 3; Silver Bow (exclusive of Butte), 4; Butte, 17; Billings, 1. Total, 58. Total last month, 40. Total January, 1912, 86.

Typhoid Fever—Cases of Typhoid were reported as follows: Great Falls, 2; Dawson, 1; Fergus, 13; Helena, 1; Park (exclusive of Livingston), 4. Total, 21. Total last month, 16. Total January, 1912, 14.

Measles—Cases of Measles were reported as follows: Beaverhead, 2; Carbon, 3; Custer, 14; Dawson, 2; Flathead, 6; Gallatin, 4; Hill, 1; Madison, 1; Ravalli, 1; Butte, 8; Yellowstone, 1. Total, 43. Total last month, 3. Total January, 1912, 9.

BIRTHS REPORTED TO STATE BOARD OF HEALTH FOR MONTH OF JANUARY, 1913, AND COMPARATIVE BIRTH AND DEATH RECORD IN THE STATE.

	Males	Females	Totals	Deaths	Excess of births	Excess of deaths
Beaverhead	3	6	9	4	5	.....
Broadwater	3	4	7	3	4	.....
Carbon	10	10	20	15	5	.....
Cascade (Excl. of)	11	9	20	8	12	.....
Great Falls	21	22	43	30	13	.....
Chouteau	5	1	6	5	1	.....
Custer	6	8	14	13	1	.....
Dawson	17	13	30	9	21	.....
Deer Lodge (Excl. of)	2	1	3	18	.....	15
Anaconda	4	8	12	16	.....	4
Fergus	8	9	17	26	.....	9
Flathead (Excl. of)	19	24	43	5	38	.....
Kalispell	12	9	21	3	17	.....
Gallatin (Excl. of)	13	4	17	7	10	.....
Bozeman	9	7	16	12	8	.....
Granite	3	2	5	3	2	.....
Jefferson	7	2	9	2	7	.....
Lewis and Clark (Excl. of)	.....	3	3	7	.....	4
Helena	10	15	25	18	7	.....
Lincoln	1	8	9	4	5	.....
Madison	3	6	9	5	4	.....
Meagher	1	8	9	7	2	.....
Missoula (Excl. of)	8	7	15	17	.....	2
Missoula City	20	7	27	25	2	.....
Musselshell	14	11	25	11	14	.....
Park (Excl. of)	5	.....	5	6	.....	1
Livingston	6	8	14	1	13	.....
Powell	5	6	11	14	.....	3
Ravalli	15	8	23	9	14	.....
Rosebud	3	3	6	24	.....	18
Sanders	3	4	7	3	4	.....
Silver Bow (Excl. of)	14	10	24	22	2	.....
Butte	41	34	75	75	.....	.....
Sweet Grass	5	5	10	4	6	.....
Teton	12	6	18	22	.....	4
Valley	11	10	21	2	19	.....
Yellowstone (Excl. of)	12	16	28	6	22	.....
Billings	10	9	19	16	3	.....
Blaine	6	4	10	4	6	.....
Hill	15	24	39	18	21	.....
Totals	373	351	724	499	225	

DEATHS (EXCL. OF STILLBIRTHS) REPORTED TO THE STATE BOARD OF HEALTH FOR MONTH OF JANUARY, 1913, ARRANGED ACCORDING TO COUNTIES AND CITIES.

	Spotted Fever	Small Pox	Tuberculosis	Diphtheria	Scarlet Fever	Measles	Typhoid Fever	Meningitis	Whooping Cough	Pneumonia	Nephritis	Organic Heart Disease	Malignant Tumors	Acute Intestinal Diseases	Violence	Suicide	Alcoholism	All Other Causes	**Totals**
Beaverhead	..	..	1	..	..	1	..	..	..	..	..	1	..	..	..	..	..	1	4
Broadwater	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	3
Carbon	..	..	1	..	..	..	..	1	..	1	2	..	3	1	1	..	..	5	15
Cascade (Excl. of)	..	..	..	..	..	..	..	..	..	3	..	..	..	2	..	..	1	2	8
Great Falls	..	..	..	..	1	..	..	..	..	5	2	4	1	..	3	1	..	13	30
Chouteau	..	..	..	..	..	..	1	..	..	3	..	..	..	..	1	..	..	..	5
Custer	..	..	1	..	..	..	..	..	..	2	1	1	..	..	1	1	..	6	13
Dawson	..	..	1	..	..	..	..	..	..	5	1	..	..	..	..	..	..	2	9
Deer Lodge (Excl. of)	..	..	2	..	..	..	..	..	..	1	..	2	1	..	..	..	..	12	18
Anaconda	..	..	..	..	..	..	..	..	..	6	1	..	..	..	1	1	..	7	16
Fergus	..	..	..	..	2	..	2	5	..	4	..	..	1	..	1	..	..	11	26
Flathead (Excl. of)	..	..	1	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	5
Kalispell	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	3
Gallatin (Excl. of)	..	..	..	..	..	..	..	..	..	1	..	1	..	..	3	..	..	2	7
Bozeman	..	..	..	..	..	..	..	..	..	2	2	1	4	..	..	..	..	3	12
Granite	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	3
Jefferson	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	2
Lewis and Clark (Excl. of)	..	..	..	..	..	..	..	..	..	1	1	2	..	..	..	..	..	3	7
Helena	..	..	..	..	..	..	..	..	1	5	2	2	1	..	1	..	..	6	18
Lincoln	..	..	..	..	..	..	..	..	..	2	..	1	1	..	..	..	..	..	4
Madison	..	..	1	..	..	..	..	..	..	1	..	2	..	..	1	..	..	..	5
Meagher	..	..	..	..	..	..	..	..	..	2	1	1	..	1	..	..	..	2	7
Missoula (Excl. of)	..	..	2	..	..	..	..	1	..	1	..	1	..	..	3	..	1	8	17
Missoula City	..	..	1	..	..	..	..	..	..	4	2	2	3	..	3	..	1	9	25
Musselshell	..	..	..	..	..	..	..	1	..	2	..	..	..	1	2	1	..	4	11
Park (Excl. of)	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	5	6
Livingston	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Powell	..	..	2	..	2	..	..	..	..	1	1	1	..	..	1	..	..	6	14
Ravalli	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2	..	..	5	9
Rosebud	..	..	8	..	..	..	..	..	..	9	..	1	..	..	..	..	..	6	24
Sanders	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3
Silver Bow (Excl. of)	..	..	5	..	..	..	..	1	..	3	..	3	..	..	5	..	..	5	22
Butte	..	..	13	..	4	..	..	2	..	10	4	3	3	..	7	1	1	27	75
Sweet Grass	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	3	4
Teton	..	..	2	2	..	..	..	..	..	7	1	..	..	2	3	..	..	5	22
Valley	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	2
Yellowstone (Excl. of)	..	..	..	..	..	..	..	..	..	1	1	..	..	1	..	..	..	3	6
Billings	..	..	1	..	..	..	..	1	..	1	1	1	..	2	1	1	1	6	16
Blaine	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	3	4
Hill	..	..	2	..	..	..	1	..	..	3	1	3	..	..	1	1	..	6	18
Totals	..	..	47	2	9	1	4	12	1	90	24	36	20	11	44	7	6	185	499

Estimated Population	375,000
Monthly Death Rate per 1,000 Population	.751
Annual Death Rate per 1,000 Population	90.12

DIVISION OF FOODS AND DRUGS.

Dr. W. F. Cogswell, Secretary, State Board of Health,
Food Commissioner.
F. J. O'Donnell, Inspector.

Laboratory Staff.

W. M. Cobleigh, Chemist.
C. E. Mollet, Director, Drug Analysis.
D. L. Weatherload, Analyst.
D. B. Swingle, Bacteriologist.
Carl Gottschalck, Assistant in Chemistry.

LABORATORY REPORT.

Ninety-one food and water samples have been examined in the Board of Health laboratory since the last report was published. These samples include water for sanitary analysis, candy, milk, cream, salt, lard, syrup, and chinese sauce for noodles.

A detailed report on these samples together with all results obtained on samples examined during the month of February will be published in the March bulletin of the Board of Health. Deferring the publication of these results now completed, for one month, will make it possible in the future to publish the work of each month separately. This plan will facilitate the office work required to get out the report and will make monthly comparisons of adulterations possible in the future. Forty-two per cent of the food products represented by the samples above were adulterated.

Water.

"The State Board of Health has general oversight and care of all inland waters and all streams, lakes, and ponds used by any city, town, or public institution or by any water or ice company in this state as sources of water supply for domestic use and of all springs, streams, and watercourses tributary thereto," according to Section 1559, Revised Codes of Mon- . na. In this connection it should be noted that there are many difficult problem confronting the State relative to sewage disposal and to methods of properly guarding the purity of the waterways that are used for public water supplies. The report of the Committee on Standards of Purity for Rivers and Waterways, a copy of which appears elsewhere in this bulletin, will be helpful in establishing consistent and effective policies for the future guidance of health authorities of the State, and it is hoped that all interested in these problems will carefully study the report.

The Board of Health Laboratory has secured much valuable data on the extent of the pollution of some of the most important waterways in the state. This information is now being used in connection with the study of the contamination of Milk River between Havre and Chinook. This work was started by the Secretary of the Board soon after assuming office on December. A final opinion is not ready for publication because it will require repeated laboratory tests before definte information can be announced.

Twenty-nine samples of water were analyzed for the health authorities at Malta since the last report was made. These samples were taken from wells in the town used for domestic purposes. A very large proportion of these samples was found to be contaminated both by bacteriological and chemical tests. Proper precautions in the use of these waters were given.

REPORT OF COMMITTEE ON STANDARDS OF PURITY FOR RIVERS AND WATERWAYS.

At a joint meeting of the Great Lakes International Pure Water Association and the National Association for Preventing the Pollution of Rivers and Waters, held in Cleveland, Ohio, in October, 1912, a committee report was read by Mr. George C. Whipple that should receive careful attention by all those who are interested in the policies that shall control the supervision of the rivers and waterways of Montana. The report of the committee, which is given below in full, was signed by Mr. George C. Whipple, Mr. George Wisner, Dr. A. J. McLaughlin, Dr. Edward Bartow and Mr. Harry W. Clark.

"This committee finds than on account of the increasing population of the country it is and always will be physically impossible to maintain waterways in their original and natural condition of purity. A reasonable degree of cleanliness should nevertheless be demanded.

The discharge of raw sewage into streams and harbors should be universally prohibited by law. The method of disposal of sewage by dilution is recognized as sound in principle and safe in practice if carried one with proper restrictions.

For each waterway at any gven point there is a limit to the amount of permissible discharge of waste matter, depending upon the use that is made of the river and the character of the territory through which it flows. No universal standard of purity can be wisely established or maintained. When the extent of the pollution is such as to affect the public health in any way by any reasonable use of the river the sanitary aspect of the situation should control, and the degree of pollution should be regulated accordingly. The court must decide what is "reasonable" use. When the extent of the pollution is such as to caluse sensible offense to public decency in the course of any reasonable use of the river, this aspect of the situation may properly control. When the extent of pollution is such as to cause material injury to fish or shellfish industries or to the ice industry, this element may control. When the extent of the pollution is such as to cause the silting up of the channels of navigable streams, this element may control.

Even when the demands of public health, offense to decency and interference with navigation are such as to place a limit to the pollution of the stream, the economic aspects of the case should be considered in regulating the amount of permissible discharge of waste matter, the fundamental principle being that the results accomplished shall be reasonably commensurate with the cost of prevention of the pollution.

While no universal standard of purity applicable to all rivers and waterways can be established, it is believed to be feasible to establish and maintain appropriate standards of a general nature for waters that fall within certain particular groupings. The committee has this matter under advisement, but is not prepared to report upon it in detail at this time.

Discharge of Sewage.

In asmuch as the safetv of public water supplies is the most important element in the problem of stream pollution at the present time, the following general principles should govern the discharge of sewage and waste matters into rivers and waterways.

Streams from which water supplies are taken without purification should not receive any fecal matter, sewage, sewage effluent or wastes that will render the water a menace to health or otherwise impair its natural quality.

Streams from which water supplies are taken and used after purification should not receive fecal matter, sewage, sewage effluent or waste matters in such quantities that the contamination of the water at any waterworks intake would put an unreasonable burden upon the purification works, or in quantities sufficient to produce the conditions referred to in the next paragraph.

Streams not used for water supply may receive sewage sewage wherever and in such quantities that its entrance will not sensibly offend decency in the reasonable public use of the stream, or cause interference with navigation or with valuable fish industries or the ice industry. Where this cannot be done the sewage or waste should receive such treatment before discharge as to bring the effluent within this rule, due regard being given to the relative cost of the processes required and the benefits to be derived.

Large lakes from which water is used for a public water supply without filtration should not receive any fecal matter, sewage or sewage effluent within a distance of several miles from the intake, depending upon local conditions as to currents, and suitable provision should be made for disinfecting the water supply.

Large lakes from which water is used for public water supply after filtration should not receive fecal matter, sewage, sewage affluents or other waste matters in such amounts or at such places that the water reaching the intake would be contaminated to the extent that an unreasonable load would be placed upon the filter, or in quantities sufficient to produce the conditions referred to in the next paragraph.

Lakes not used for water supply, harbors and tidal estuaries may receive sewage if discharged in such a manner as to be quickly and thoroughly diluted, so that its entrance will not sensibly offend decency in the reasonable use of the water, or interfere with navigation. Where this cannot be done sewage should receive such treatment before discharge as to bring the effluent within this rule, due regard being given to the relative cost of the processes required and the benefits to be derived.

The data for deciding what is a reasonable burden to place

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upon a water filtration plant have not yet been secured. It is recognized that water filtration plants are not infallible and that for this reason the work that they are called upon to do must not be too great. Until this fundamental question is settled it will not be possible to formulate reasonable standards of purity for streams necessarily used both for sewage disposal and for water supply. Often greater economy can be secured by abandoning water supplies from polluted streams than by attempting to reduce the pollution to the required extent.

While recognizing that the pollution of many rivers and waterways is inevitable and that absolute prevention of pollution is impossible, it is deemed imperatively necessary that some control over the discharge of waste matters into rivers and waterways be maintained. The committee heartily endores, therefore, the movement that is being made to keep the pollution of streams within reasonable bounds.

The committee receommends the adoption by the association of these fundamental propositions, believing that they will serve as a basis for the establishment of more detail standards later and will be helpful to those who at the present time are engaged in formulating policies in regard to this matter. The committee also requests that it be allowed to continue its work for another year."

WOODROW WILSON ON PURE FOOD.

President-elect Woodrow Wilson contributes an article to the November Woman's Home Companion entitled "The New Meaning of Government," in which he makes the point that those who govern us at Washington must "keep house" for the whole people and not put the revenues of the government at the disposal of a limited governing class. Following is an extract.

"Consider the duty of the government regarding pure food. The new aspect of government is very well illustrated in the care that the government takes, when it is justly conducted, to see to it that the food the people eat is pure. Pure food laws, whether of the state or of the nation, are of capital and fundamental importance. No man should be allowed to sell impure food, or adulterated food, or food from which the nutritious quality has ben taken. And one of the great scandals of our time is that the pure food laws we fought so hard to get are so often ignored and violated and circumvented.

"This is not as new a function of government as some people suppose, but it is one which, unfortunately, our own governments, state and federal, took up very tardily, and which required the persistent agitation of such men as Doctor Wiley to make effective in the field of public opinion.

"I do not know any function of government in which the two sides we have to make sure of in politics are more clearly illustrated. In the first place, the law must be clear, explicit, founded upon fact, unmistakable in its commands and in its penalties. But the law will not enforce itself.

"And the indispensable second requirement is that the government should be absolutely independent of the influences which would resist or impair the application of such laws. It must be beyond being 'reached' in any way. Its inspection of foods must be thorough, intelligent, fearless; and its application of the law must be absolutely without respect of persons or interests, financial or political.

"It is a serious question now in many quarters whether these things can be said either of our pure food laws or of their administration. Until that doubt is entirely removed, our government will not have squared itself with the duty and the standard of the times."—Oklahoma State Board of Health Bulletin, January 1, 1913.